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The 1982 Iowa Corn Yield Test Report, District 1

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The 1982 Iowa Corn Yield Test Report, District 1

Abstract

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the sixty-third consecutive year for the test.

Disciplines

Agriculture | Agronomy and Crop Sciences



- Crops
- Soils
- Climate

THE 1982 IOWA CORN YIELD TEST REPORT

District 1

Results of the Iowa Corn Yield Test are published to aid Iowa farmers in selecting corn varieties. This is the sixty-third consecutive year for the test.

The presentation of data for the varieties tested does not imply approval or endorsement by the authors or by the agencies sponsoring or conducting the test. Entries in tables 1, 2, and 3 are designated by brand name and variety.

1982 Procedure

Producers of corn seed and Iowa State University were eligible to enter varieties in the Iowa Corn Yield Test. Each producer was allowed a maximum of six entries per district. All entries had to be available in a quantity of at least 10 bushels of seed.

One hundred ninety-seven entries were compared in this test—one hundred in the early to medium test and ninety-seven in the medium to late test. Fifteen of them that were determined to be widely grown, were entered by Iowa State University, and were planted in both the early and late test. A widely grown entry was planted on 0.79 per cent or more of the corn acreage in the district according to a 1980 survey of Iowa corn growers. Iowa State University entered a maximum of three widely grown varieties of any given brand. These entries were given priority over the remaining 167 entries made by seed producers.

Each entry was replicated four times in four-row plots at a planting rate of 23,500 kernels per acre at each location. All locations were machine-planted. The center two rows of each plot were harvested with a corn combine. No gleanings or dropped ears were included in yield data. A moisture determination was made from each plot, and yields were corrected to 15.5-percent moisture for shelled corn.

How Information Is Presented

The data presented are averages of two location in 1980, 1981, and 1982. Yield in bushels per acre and percentage of moisture, root lodging, stalk lodging, dropped ears, and stand are shown for all entries in 1982 and for those tested in 1980 and 1981 that were in the 1982 test.

Prepared by K. E. Ziegler, instructor in agronomy, and A. R. Campbell, associate professor of agronomy and secretary of the Iowa Crop Improvement Association.

Interpretation of Results

Yield differences due to variation in soil, fertility, moisture availability, insect infestation, and diseases, plus any variation due to planting and harvesting techniques, are identified through statistical analysis. The LSD values shown in tables 1, 2, and 3 represent, in bushels per acre, the amounts of yield variation that could be due to variations in the factors just mentioned. In comparing varieties, yield differences greater than the LSD value can be attributed to genetic differences in the yield potential of these varieties; yield differences less than the LSD value are not statistically different and could have been due to other factors.

Grain moistures shown in tables 1, 2, and 3 are indicators of maturity and natural drying rate. Maturity of varieties entered generally ranged from early to full season. Yield comparisons should be made among varieties of similar maturity in the same test.

It is important to select varieties having stable performance over a range of environmental conditions. High yields for two or more consecutive years indicate stable performance. Supplemental yield and agronomic information about specific varieties may be obtained from your seed corn dealers and from neighbors who have grown these varieties.

1982 Field Data

The District 1 test was conducted on farms operated by William Morris near Sheldon in Sioux County and by the Jones Brothers near Rossie in Clay County. The field data are presented in table A.

Subsoil moisture for the district was favorable at planting time. Rainfall was well above normal in May, well below in June, below in July, above in September, and well above normal to below normal west to east across the district in August. Temperatures were above normal in May, well below normal in June, and near normal in July, August, and September. The average district yield was 17 bushels per acre lower than the mean of the five preceding years' averages.

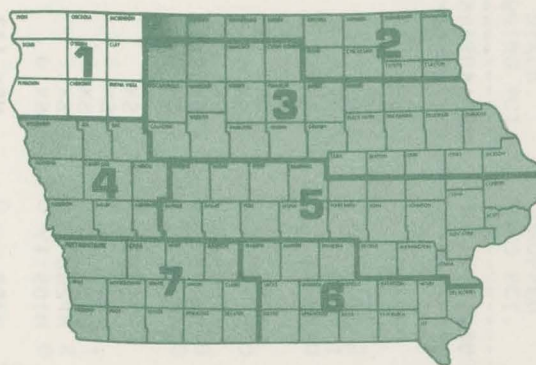


TABLE 1. AVERAGE PERFORMANCE OF VARIETIES TESTED IN DISTRICT 1 EARLY TO MEDIUM TEST.
23,500 PLANTING RATE. LSD FOR 1982 YIELD IN BUSHELS IS 11.

BRAND	VARIETY	CROSS	YIELD BU./A			MOISTURE PCT.			ROOT LODGING PCT.			STALK LODGING PCT.			DROPPED EARS PCT.			STAND PCT.		
			1980	1981	1982	1982	1981	1980	1982	1981	1980	1982	1981	1980	1982	1981	1980	1982	1981	1980
GOLDEN HARVEST	H2300	SX			112	17.7			6			13			2			89		
STAUFFER	4402	SX		119	122	18.3	21.8		2	1		17	10		1	1		89	89	
RENZE	6100	SX			113	18.4			4			11			0			85		
TROJAN	T950	SX			110	18.5			1			11			1			81		
SAR	SX103	SX		129	110	18.6	22.8		1	1		13	8		0	1		89	86	
*PIONEER	3780	SX	139	120	125	18.6	21.8	17.4	1	1	0	9	5	1	1	0	2	91	89	90
RO	2375	SX			106	18.7			0			3			1			80		
RO	2300A	SX			101	18.8			1			24			0			80		
*SAR	SX123	SX	136	115	117	18.8	21.8	17.5	0	2	0	15	8	1	0	0	1	89	83	88
AMES BEST	AB105	SX			115	18.8			1			14			1			85		
NORTHROP KING	PX9288	SX			95	18.8			1			22			0			92		
SOKOTA	TS60	SX			110	18.8			0			11			0			90		
CENEX	2106	SX		124	110	18.8	21.5		1	2		12	6		0	0		85	83	
MIGRO	HP266	SX			113	18.8			2			11			0			86		
LAND O' LAKES	M1051TY	SX			113	18.9			2			11			0			85		
*SUPERCROST	2350	MSX	137	126	111	18.9	22.4	18.1	3	3	0	11	8	1	0	2	0	86	89	87
KALTENBERG	KX55	SX			110	18.9			2			17			0			84		
*DEKALB	XL25A	SX	124	121	103	18.9	22.0	18.6	0	3	0	3	8	2	0	1	0	85	90	88
GOLD TAG	1822	SX			111	18.9			2			18			0			83		
PRIDE	4422	SX			103	18.9			0			3			1			80		
JACOBSEN	JS39	SX	135	124	111	19.0	22.0	17.3	2	4	0	13	9	1	0	0	0	89	84	81
KRUGER	8101	SX		108	102	19.3	21.8		1	1		9	7	1	1	1		78	71	
AMES BEST	VIKE 100	SX	145	121	105	19.3	21.9	18.3	6	2	0	16	8	1	1	0	0	76	88	92
MCCURDY	80-71	SX			105	19.3			1			11			0			85		
PAG	SX181	SX	127	95	108	19.4	22.4	18.7	5	5	2	7	11	0	0	2	0	89	80	89
CROWS	199	SX			123	19.4			3			12			1			88		
SUPERCROST	2396	SX	139	131	110	19.5	22.2	18.1	0	5	0	9	7	1	0	1	0	82	85	83
FS	211	SX	134	136	117	19.5	21.3	18.2	5	4	0	23	3	1	1	1	1	86	91	77
*FUNK	G4315	MSX	137	126	116	19.6	21.5	18.2	2	6	0	21	6	1	1	0	0	98	89	90
FONTANELLE	405	SX			118	19.6			2			21			3			88		
JACOBSEN	JS19	SX	138	117	114	19.7	21.8	17.8	6	3	0	22	8	1	2	0	1	82	78	85
GOLD TAG	1906	MSX			126	19.7			0			5			0			92		
PAYMASTER	2890	SX			129	19.8			1			10			0			91		
*PIONEER	3732	SX		107	116	19.9	22.0		2	1		10	9		1	2		88	87	
FEDERAL	FX6	SX	128	134	103	19.9	23.0	18.8	4	4	0	28	9	1	0	0	0	90	88	82
*PIONEER	3747	SX	120	119	119	19.9	22.6	17.6	5	1	0	6	5	3	1	0	0	92	91	85
DISCO	DS5519	SX			123	19.9			2			3			0			87		
LYNKS	LX4100	SX	138	124	116	20.0	22.8	19.0	0	3	0	5	15	1	0	0	0	78	80	84
CARGILL	862	SX	133	119	124	20.0	21.7	18.8	0	3	0	13	8	1	0	1	0	87	81	81
*SAR	SX125	SX		109	124	20.1	21.9		4	6		13	8		1	0		88	77	
MELLOW DENT	217AA	SX		120	126	20.2	22.6		0	4		14	7		0	0		88	81	
PIONEER	3707	SX			118	20.2			2			16			0			93		
MCCURDY	81-3	SX			113	20.2			1			5			0			91		
CENEX	2108	SX	137	118	124	20.3	22.8	18.6	0	1	0	9	7	1	0	2	0	79	80	83
RENZE	6242	SX	146	136	135	20.3	21.5	19.1	2	1	0	7	8	1	0	0	0	90	86	92
PAYMASTER	2990	SX		119	139	20.3	22.8		0	2		3	6		1	0		91	92	
DFKAI B	XL36	SX		122	109	20.3	23.2		3	4		15	9		1	1		85	80	
AMES BEST	AB108A	SX	139	119	133	20.3	22.9	19.1	0	4	0	17	8	1	1	1	0	93	88	88
GOLDEN HARVEST	H2440	MSX	142	125	131	20.4	22.4	18.8	1	2	0	8	4	1	0	0	0	89	85	83
SUPERCROST	2410	SX			122	20.4			0			6			0			85		
KALTENBERG	KX68	SX		120	124	20.4	22.8		2	1		15	6		3	0		92	68	
HOEGEMEYER	SX2570	SX			129	20.4			3			8			0			92		
SAR	SX200A	SX	155	126	123	20.4	22.7	18.7	0	1	0	5	6	0	0	0	0	91	88	92
*FUNK	G4323	MSX	139	133	113	20.4	22.4	18.9	5	5	0	22	5	1	0	0	2	90	87	86
TROJAN	T1000	SX			123	20.4			0			7			0			84		
STAUFFER	5602	SX	144	123	132	20.4	23.1	18.8	1	1	0	6	7	1	0	0	1	90	81	88
KALTENBERG	KX61	SX		134	108	20.4	22.6		1	2		8	6		0	1		76	84	
*DEKALB	XL32A	SX	139	141	119	20.4	23.0	19.2	3	4	1	21	7	0	2	0	1	88	89	84
MCCALLISTER	SX8003	SX		133	133	20.5	24.0		2	1		8	9		0	1		83	83	
*GOLDEN HARVEST	H2445	SX	137	126	104	20.5	22.9	19.0	3	4	2	18	6	1	1	1	3	85	82	80
AMES BEST	AB107	SX			123	20.5			1			9			0			91		
AMES BEST	VIKE 110	SX			133	20.5			1			14			1			94		
MIGRO	HP360	SX		123	119	20.6	22.7		4	4		4	8		0	1		87	78	
JACQUES	JX151	SX			125	20.6			2			3			0			89		
CLAY COUNTY	2238	SX			102	20.6			1			5			0			71		
DEKALB	XL28	SX		114	122	20.6	23.6		3	4		8	9		1	0		86	86	
FS	412	SX		134	146	20.6	24.3		8	0		11	4		0	0		95	83	
FUNK	G4342	SX			120	20.6			6			20			0			91		
FS	275	SX			126	20.6			1			6			0			88		
FONTANELLE	420	SX	147	126	121	20.7	22.6	19.8	3	5	0	12	10	0	2	0	3	83	80	90
MIGRO	M2022X	SX			130	20.7			1			9			1			93		
GRUHN HYBRID	SX2A	SX			128	20.7			0			8			0			89		
FONTANELLE	370	SX			132	20.7			1			1			0					

TABLE 3. AVERAGES OF 1981-82 AND 1980-82 OF VARIETIES
TESTED IN DISTRICT 1. LSD FOR YIELDS ARE 8 BUSHEL
FOR 80-82 AND 6 BUSHEL FOR 81-82.

BRAND	VARIETY	CROSS	YIELD BU./A		MOISTURE PCT.		ROOT LODGING PCT.		STALK LODGING PCT.		DROPPED EARS PCT.	
			80-82	81-82	81-82	80-82	80-82	81-82	80-82	81-82	80-82	81-82
STAUFFER	4402	SX		120	20.0			1		14		1
CENEX	2106	SX		117	20.1			1		9		0
*PIONEER	3780	SX	128	122	20.3	19.4	1	1	5	7	1	1
FS	211	SX	129	126	20.4	19.7	3	4	9	13	1	1
*SAR	SX123	SX	122	115	20.4	19.4	1	1	7	11	0	0
JACOBSEN	JS39	SX	123	117	20.5	19.4	2	3	8	11	0	0
KRUGER	8101	SX		105	20.5			1		8		1
*DEKALB	XL25A	SX	117	114	20.6	19.9	1	1	5	7	0	0
*FUNK	G4315	MSX	127	122	20.6	19.8	3	4	9	13	0	1
AMES BEST	VIKE 100	SX	124	113	20.6	19.8	3	4	8	12	1	1
SAR	SX103	SX		120	20.7			1		10		1
JACOBSEN	JS19	SX	123	115	20.7	19.8	3	4	10	15	1	1
*SUPERCROST	2350	MSX	126	120	20.8	19.9	1	2	7	9	1	1
SUPERCROST	2396	SX	127	120	20.8	19.9	2	2	6	8	0	0
CARGILL	862	SX	125	122	20.8	20.2	1	2	7	10	0	1
RENZE	6242	SX	139	135	20.9	20.3	1	1	5	7	0	0
PAG	SX181	SX	110	101	20.9	20.2	4	5	6	9	1	1
*SAR	SX125	SX		113	21.0			5		12		1
*PIONEER	3747	SX	119	118	21.2	20.0	2	3	5	7	0	0
*PIONEER	3732	SX		112	21.3			1		8		1
GOLDEN HARVEST	H2440	MSX	133	128	21.4	20.5	1	1	4	6	0	0
LYNKS	LX4100	SX	126	120	21.4	20.6	1	2	7	10	0	0
*FUNK	G4323	MSX	129	124	21.4	20.6	3	4	9	13	1	1
MELLOW DENT	217AA	SX		123	21.4			2		10		0
SUPERCROST	2790	SX		122	21.4			0		9		0
O'S GOLD	6880	SX	130	124	21.4	20.5	1	1	5	8	0	0
FEDERAL	FX6	SX	122	119	21.4	20.6	2	4	12	18	0	0
NORTHROP KING	PX39	SX	131	126	21.5	20.7	2	2	7	11	1	1
KALTENBERG	KX61	SX		121	21.5			1		7		0
CENEX	2108	SX	126	121	21.5	20.6	0	1	6	8	1	1
SAR	SX200A	SX	135	124	21.5	20.6	0	0	4	6	0	0
PAYMASTER	2990	SX		129	21.5			1		5		0
KALTENBERG	KX68	SX		122	21.6			2		10		2
CLAY COUNTY	2217	SX	124	119	21.6	20.9	2	2	7	10	1	1
AMES BEST	AB108A	SX	131	126	21.6	20.8	2	2	9	12	1	1
MIGRO	HP360	SX		121	21.6			4		6		0
FONTANELLE	420	SX	131	123	21.6	21.0	3	4	7	11	2	1
FS	444	SX	133	130	21.7	20.9	2	4	5	7	2	1
*GOLDEN HARVEST	H2445	SX	124	118	21.7	20.8	2	3	9	13	2	1
PFISTER	30	SX	136	129	21.7	21.0	3	4	5	8	2	2
JACOBSEN	JS50A	SX	125	118	21.7	20.8	1	1	6	8	1	1
DEKALB	XL36	SX		115	21.7			4		12		1
STAUFFER	5602	SX	133	127	21.7	20.8	1	1	5	6	0	0
WILSON	1100B	SX		127	21.8			1		7		0
*DEKALB	XL32A	SX	134	132	21.8	20.9	3	4	8	12	1	1
PAYCO	SX788	SX		131	21.9			1		8		0
RENZE	6244	SX		135	21.9			1		7		1
KRUGER	8107	SX		124	21.9			1		8		0
LOWE	217	SX	131	121	21.9	21.0	1	1	5	7	0	0
CURRY	1420	SX		127	21.9			3		7		0
NC+	3990	SX		129	21.9			1		8		1
LOWE	222	SX	121	111	21.9	20.9	1	2	9	13	1	0
MCALLISTER	SX8001	SX		127	22.0			2		2		0
GOLDEN HARVEST	H2480	SX		139	22.0			3		7		1
DEKALB	XL28	SX		118	22.1			3		9		1
SOKOTA	660	SX	136	130	22.1	21.1	1	1	4	5	0	1
PAYCO	SX844	SX		116	22.2			4		13		1
ENO	SX18	SX		129	22.2			2		7		0
TALL CORN	SX105	SX	130	123	22.2	21.1	2	3	6	8	0	0
STAUFFER	6389	SX	126	120	22.2	21.3	1	1	9	13	0	0
MCALLISTER	SX8003	SX		133	22.3			2		9		0
KALTENBERG	KX67	SX		132	22.3			1		6		0
*PAG	SX397	SX	129	118	22.4	21.5	2	4	21	31	1	0
*TROJAN	T1058	SX		101	22.4			2		13		0
FS	412	SX		140	22.4			4		7		0
LYNKS	LX4210	SX		121	22.5			1		7		1
GRUHN HYBRID	SX7AA	SX		124	22.5			5		15		0
MCCURDY	4956	SX		127	22.6			0		7		1
PAG	SX249	SX		118	22.6			5		13		1
NC+	3830	SX		122	22.7			2		15		1
NC+	4155	SX	137	128	22.8	22.2	4	5	6	9	1	1
PRIDE	6611	SX		116	22.8			2		10		0
TALL CORN	SX108	SX		145	22.8			7		5		0
NORTHROP KING	PX9454	SX		117	22.8			0		9		1
FONTANELLE	435	SX		145	23.3			5		4		1
MCCURDY	5596	SX	125	115	23.4	22.2	5	7	12	17	0	0
PAYMASTER	4790	SX	134	126	23.7	22.5	1	2	3	5	1	1
CFS	W5410	SX		136	23.8			3		10		0
FUNK	G4438	SX		118	24.0			3		29		0
LOWE	317	SX	139	135	24.1	23.0	0	1	5	7	0	1
*DEKALB	XL54	SX	135	129	24.1	23.6	4	4	11	17	0	0
PIONEER	3541	SX	140	137	24.1	22.5	3	5	3	5	1	1
RENZE	6340	SX	156	148	24.4	23.3	1	2	4	5	1	1
CARGILL	921	SX	130	127	24.4	23.4	1	1	17	25	0	0
JACQUES	7780	SX		141	24.6			2		7		1
WILSON	1600	SX	142	137	24.9	23.6	1	2	5	7	0	0
SOKOTA	TS75	SX	141	135	25.0	23.6	2	3	6	8	0	0
JACQUES	JX179	SX	143	137	25.1	24.3	1	2	7	10	0	1
FUNK	G4435	MSX		135	25.2			4		8		0
TROJAN	T1100	SX		138	25.2			1		4		1
CFS	W4000	SX	147	147	25.4	24.5	1	2	9	14	1	1
FEDERAL	FX7	SX		127	25.4			7		12		0
HORIZON	861	SX	144	134	26.2	25.6	8	12	9	12	0	0

Table A. Field Data

	Morris Farm Marcus silty clay loam			Jones Farm Primghar silty clay loam		
Fertilizer applied, lbs.	N	P ₂ O ₅	K ₂ O	N	P ₂ O ₅	K ₂ O
Plowdown.....	18	46	60	145	95	110
Preplant.....	90	—	—	—	—	—
TOTAL.....	108	46	60	145	95	110
1981 crop.....	Corn			Soybeans		
Row width.....	30 inches			30 inches		
Planting date.....	April 26 & 27			April 28		
Harvest date.....	Nov. 3 & 4			Nov. 1 & 2		

District 1

Designations Identifying Brands in the Yield Test

Ames Best	Ames Best Hybrids, Ames, Ia. 50010
Cargill	Cargill, Inc., Minneapolis, Minn. 55440
Cenex	Cenex Seed Corn Plant, Cedar Falls, Ia. 50613
CFS	Custom Farm Seed, Moline, Ill. 60954
Clay County	Clay County Seed Company, Spencer, Ia. 51301
*Crows	Crows Hybrid Corn Co., Milford, Ill. 60953
Curry	Curry Seed Co., Elk Point, S.D. 57025
*DeKalb	DeKalb AgResearch, Inc., DeKalb, Ill. 60115
Disco	Disco Seeds, Mitchell, S.D. 57301
Eno	Eno Farms, Inc., Sheffield, Ia. 50475
Federal	Federal Hybrids, Marion, Ia. 52302
Fontanelle	Fontanelle Hybrids, Nickerson, Neb. 68044
FS	Growmark, Inc., Bloomington, Ill. 61701
*Funk	Funk Seeds International, Inc., Bloomington, Ill. 61701
*Golden Harvest	The J. C. Robinson Seed Co., Waterloo, Neb. 68069
Gold Tag	Ferry-Morse Seed Co., Geneseo, Ill. 61254
Gruhn Hybrid	Gruhn Hybrids, Manilla, Ia. 51454
Hoegemeyer	Hoegemeyer Hybrids, Inc., Hooper, Neb. 68031
Horizon	Horizon Seeds, Inc., Lincoln, Neb. 68501
Iowa State	Ralph Mathis, Elkhart, Ia. 50073
Jacobsen	Jacobsen Hybrid Corn Co., Inc., Lake View, Ia. 51450
Jacques	Jacques Seed Company, Prescott, Wis. 54021
Kaltenberg	Kaltenberg Seed Farms, Waunakee, Wis. 53597
Kruger	Kruger Seed Company, Cedar Falls, Ia. 50613
Land O'Lakes	Land O'Lakes Inc., Fort Dodge, Ia. 50501
Lowe	Lowe Seed Company, Kankakee, Ill. 60901
Lynks	Lynks Hybrids, Marshalltown, Ia. 50158
McAllister	McAllister Seed Company, Inc., Mt. Pleasant, Ia. 52641
McCurdy	McCurdy Seed Co., Fremont, Ia. 52561
Mellowdent	Mellowdent Industries, Inc., Alta, Ia. 51002
Migro	North American Plant Breeders, Ames, Ia. 50010
NC+	NC + Hybrids, Lincoln, Neb. 68504
Northrup King	Northrup King Co., Minneapolis, Minn. 55440

O's Gold	O's Gold Seed Co., Parkersburg, Ia. 50665
*PAG	PAG Seeds, Minneapolis, Minn. 55440
Payco	Payco Seeds, Inc., Dassel, Minn. 55325
Paymaster	Paymaster Seeds, Belmond, Ia. 50421
Pfister	Pfister Hybrid Corn Co., El Paso, Ill. 61738
*Pioneer	Pioneer Hi-Bred International, Inc., Des Moines, Ia. 50308
Pride	Pride Company, Inc., Glen Haven, Wis. 53810
Renze	Renze Hybrids, Inc., Carroll, Ia. 51401
RO	Ottile Seed Farms, Marshalltown, Ia. 50158
Riverside	Lynnville Seed Co., Lynnville, Ia. 50153
*Sar	Sar Hybrids, Inc., Charles City, Ia. 50616
Sokota	Sokota Hybrid Producers, Brookings, S.D. 57006
Stauffer	Stauffer Seeds, Springfield, Ill. 62704
*Super Crost	Edward J. Funk & Sons, Inc., Kentland, Ind. 47951
Tall Corn	Tall Corn Hybrids, Inc., Grinnell, Ia. 50112
*Trojan	DeKalb-Pfizer Genetics, DeKalb, Ill. 60115
Wilson	Wilson Hybrids, Inc., Harlan, Ia. 51537

*Companies with one or more widely grown entries made by Iowa State University.

Other Reports

Separate reports for variety performance are available for each district shown in fig. 1. These publications are available at your county extension office or from Publications Distribution. Printing and Publications Building, Iowa State University, Ames, Iowa 50011.

The 1982 Iowa Corn Yield Test Report:

- Pm-660-1-82 District 1
- Pm-660-2-82 District 2
- Pm-660-3-82 District 3
- Pm-660-4-82 District 4
- Pm-660-5-82 District 5
- Pm-660-6-82 District 6
- Pm-660-7-82 District 7

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